

What is claimed is:

1. A system for obtaining a fluidic sample from a container, the container defining a volume for holding the sample, the volume closed by a seal, the system comprising:
 - an outer tube having a proximal end and a distal end, the proximal end shaped to
 - 5 permit piercing the seal; and
 - an inner tube having an end region axially movable within the outer tube between a piercing position, wherein an end of the inner tube in the end region is retracted from the proximal end of the outer tube, and a transmission position, wherein the end of the inner tube extends axially beyond the proximal end of the outer tube;
 - 10 wherein the outer tube and the inner tube form a tube assembly; and
 - wherein at least one of the tube assembly and the container can be moved to cause the outer tube to pierce the seal and, after the seal is pierced, the inner tube can be used in the transmission position to permit fluid transfer with respect to the volume.
- 15 2. The system according to claim 1, wherein the inner tube is mechanically biased in the transmission position, such bias being normally overcome while the outer tube is used to pierce the seal.
3. The system according to claim 2, wherein when inner tube is in the transmission
 - 20 position, the tube assembly can be moved relative to the container so as to cause the end of the inner tube to make contact with the seal and move the inner tube into the piercing position.
4. The system according to claim 2, wherein when the inner tube is in the piercing
 - 25 position, the inner tube returns to the transmission position after the seal is pierced due to the mechanical bias.
5. The system according to claim 2, wherein the inner tube has a second end that is fixed
 - in position relative to the outer tube, and wherein the inner tube is resilient so as to cause
 - 30 the inner tube to be mechanically biased in the transmission position.
6. The system according to claim 5, wherein the second end of the inner tube extends beyond the distal end of the outer tube, and wherein a portion of the inner tube positioned

between the distal end of the outer tube and the second end of the inner tube flexes when in the inner tube is in the piercing position.

7. The system according to claim 1, wherein the inner tube is capable of moving freely
5 within the outer tube.
8. The system according to claim 1, further including a source of suction in fluid communication with the inner tube, the source of suction for aspirating the sample.
- 10 9. The system according to claim 8, further including an injection valve in fluid communication with the inner tube, the injection valve capable of selectively placing the source of suction in fluid communication with the inner tube.
- 15 10. The system according to claim 8, further comprising an analyzer for determining a characteristic of the sample aspirated from the container.
11. The system according to claim 10, wherein the analyzer is one of a chromatography column and a mass spectrometer.
- 20 12. The system according to claim 1, wherein the outer tube and inner tube are concentric.
13. The system according to claim 1, wherein the outer tube is made of one of a metal and a metal alloy.
- 25 14. The system according to claim 1, wherein the inner tube is made of a resilient material.
15. The system according to claim 1, wherei the inner tube is made of plastic.
- 30 16. The system according to claim 1, wherein the inner tube is made of at least one of the materials chosen from the group of material consisting of nitinol, polyimide and Poly Ether Ether Ketone (PEEK).

17. The system according to claim 1, wherein the inner tube is made of fused silica with a polyimide sheath.

18. The system according to claim 1, wherein the container is a microplate, the
5 microplate including a plurality of wells, each well for holding a sample and closed by a seal.

19. The system according to claim 1, further comprising a controller for controlling movement of at least one of the tube assembly and the container.

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20. The system according to claim 1, further comprising a mount that permits motion of the tube assembly relative to the container.

21. A method for obtaining a fluidic sample from a sealed container using a tube
15 assembly, the container defining a volume for holding the sample, the volume closed by a seal, the tube assembly including an outer tube having a proximal end shaped to permit piercing the seal, the tube assembly further including an inner tube having an end region axially movable within the outer tube, the method comprising:

20 placing the inner tube in a piercing position, wherein an end of the inner tube is retracted from the proximal end of the outer tube;

piercing the seal with the proximal end of the outer tube; and

placing the inner tube in a transmission position, wherein an end of the inner tube in the end region extends axially beyond the proximal end of the outer tube.

22. The method according to claim 21, further comprising applying a source of suction to the inner tube to aspirate the sample fluid from the volume.

23. The method according to claim 22, further comprising analyzing the aspirated sample fluid.

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24. The method according to claim 23, wherein analyzing includes one of chromatography and mass spectrometry.

25. The method according to claim 22, wherein applying a source of suction to the inner

tube includes applying a source of suction to the inner tube via an injection valve.

26. The method according to claim 22, wherein the container is a microplate that includes a plurality of wells, each well for holding a sample and closed by a seal, the
5 method further comprising moving at least one of the tube assembly and the container so as to aspirate sample from each well.
27. The method according to claim 21, wherein the inner tube is mechanically biased in the transmission position, and wherein placing the inner tube in the piercing position
10 includes overcoming the mechanical bias.
28. The method according to claim 27, wherein the inner tube is resilient and wherein placing the inner tube in the piercing position includes flexing a portion of the inner tube.
- 15 29. The method according to claim 28, wherein placing the inner tube in the transmission position includes returning the inner tube to the transmission position due to the resiliency of the inner tube.
- 20 30. The method according to claim 21, wherein placing the inner tube in the piercing position includes moving at least one of the tube assembly and the container such that the end of the inner tube contacts the seal and moves into the piercing position.